

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listing of claims in the application:

1-21. (canceled)

22. (currently amended) A composition comprising a mutant human S100A8 protein that is at ~~least 70%~~ at least 95% identical to SEQ ID NO:2 ~~or a mutant human S100A9 protein that is at least 70% identical to SEQ ID NO: 4~~, wherein said protein comprises at least one mutation inhibiting post-translational modification of said protein.

23. (original) The composition of Claim 22, wherein said inhibiting post-translational modification comprises conferring oxidation resistance to said protein.

24. (original) The composition of Claim 22, wherein said mutation further prevents dimerization of said protein.

25. (original) The composition of Claim 22, wherein said mutation results in an amino acid substitution of a cysteine, a lysine or a methionine residue, and wherein said mutation does not destroy leukocyte-repellent activity of said protein.

26. (original) The composition of Claim 25, wherein said amino acid substitution comprises a replacement of cysteine at residue 42 with an alanine in said human S 100A8 protein.

27. (canceled)

28. (new) A method comprising:

- a) providing; i) at least one leukocyte, and ii) the composition of Claim 22; and
- b) contacting said leukocyte with said composition under conditions suitable for repelling said leukocyte.

29. (new) The method of Claim 28, wherein said leukocyte is selected from the group consisting of a monocyte, a neutrophil and an eosinophil.

30. (new) The method of Claim 28, wherein said leukocyte expresses at least one chemokine receptor selected from the group consisting of CCR1, CCR3 and CCR5.

31. (new) A method comprising:

- a) providing; i) a subject with one or more symptoms of inflammation; and ii) the composition of Claim 22; and
- b) administering said composition to said subject under conditions such that at least one of said symptoms is reduced or eliminated.

32. (new) The method of Claim 31, wherein said one or more symptoms is selected from the group consisting of pain, heat, redness and swelling.

33. (new) The method of Claim 32, wherein said swelling comprises a leukocyte infiltrate.

34. (new) The method of Claim 33, wherein said leukocyte infiltrate comprises a cell selected from the group consisting of a monocyte, a neutrophil and an eosinophil.